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ROBBER FLIES OF THE GENUS *PHILONICUS*.

JAMES S. HINE.

Philonicus was proposed by Loew in *Linnaea Entomologica*, Volume IV, page 144, to receive a single European species which had been known under the name of *Asilus albiceps*. After studying the last named European species carefully, I find that we have at least four distinct North American species which are congeneric with it. Bellardi referred two Mexican species to the genus, but Williston concludes that one of these belongs to *Heligmoneura* and has published the synonymy in *Biologia Centrali Americana*. So the four species are made up of three from the United States and one from Mexico.

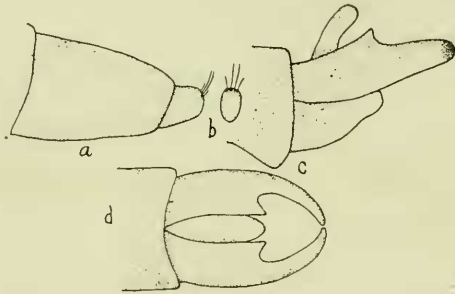
It appears that American authors have been misled by the fact that Loew proposed *Philodicus* as a generic name in another section of the same subfamily, thus giving two names so near alike as to be easily confused. His description of the latter genus is published in *Linnaea Entomologica*, Volume III, page 391. The singular thing about the matter is, that Loew himself in *Dipteren Fauna Sudafrika's*, page 144, uses *Philodicus* where he intended *Philonicus*, and I suspect this fact also has proven a stumbling block to some students.

So far as known at present there are no species of *Philodicus* in North America, so the name is most likely misplaced when used in reference to Nearctic Diptera.

In his studies of European *Asilinae* Loew used many characters taken from the oviduct; thus he separated the females into two groups, one in which the oviduct is conical and one in which the oviduct is compressed. European species appear to be separated readily by this character, but in our species, especially after they are dry, some difficulties are encountered,

for often it is impossible to say whether the oviduct is conical or flattened.

The species of *Philonicus*, so far as known, are all medium sized species; the facial gibbosity is small with comparatively few bristles; oviduct conical, end lamella with four apical bristles on the upper side. Male genitalia, as seen from the side, of ordinary size, the side pieces each have a distinct prominence at the middle above, then they are narrowed and curve inward until they almost touch at the tips. From above these same pieces are wide for slightly more than half their length, then distinctly cut out to apex with a distinct open space between them.



Philonicus albiceps Meig. a, tip of female abdomen to show its form and the apical spines; b, view of last segment from the end; c, tip of male abdomen as seen from the side; d, same from dorsal view.

It appears that what Dr. Williston has called *Stenoprosopis arizonensis* should be included in this genus; at least specimens that agree in detail with his description are at hand and the characters of *Philonicus* are very plain in both sexes, but it is a question whether the oviduct is conical in the females.

The following key may be used as an aid in separating the known Nearctic species:

- | | | |
|---|----|---------------------|
| 1. Legs in most part yellowish. | 2. | |
| At least the femora of all the legs black. | 3. | |
| 2. Wings distinctly reddish. | | <i>rufipennis.</i> |
| Wings hyaline. | | <i>arizonensis.</i> |
| 3. Legs black except the extreme bases of the tibiae. | | <i>tuxpanganus.</i> |
| Legs with the tibiae and tarsi largely reddish. | | <i>obscurus.</i> |

***Philonicus arizonensis* Williston.** Gibbosity of the face very small, with a few white bristles; front and face white; bristles and hairs of the head all white; first segment of the antenna black, second more or less yellowish and shorter than the first, third black, exclusive of the arista about as long as the other two together, arista slender and slightly shorter than the third segment. Thorax gray pollinose with a middorsal gray stripe, narrowly divided before, and two spots on each side, one before and the other behind the transverse suture. These brown markings

are not so prominent as in some of the other species of the genus. Wings hyaline; legs largely reddish, coxae colored like the thorax, femora with more or less black on the outer side, especially on apical half; tibiae and metatarsi black at apex, other tarsal segments mostly black. Abdomen dull black, before the incisures with narrow white bands, in the front margin of which there are on either side in each two or more bristles.

Length, 17 millimeters. Male and female taken in southwestern Colorado, July 14th, 1899, by E. J. Oslar.

Philonicus obscurus n. sp. General color dark with the wings pale fumose all over. The abdomen has different shades according to the view taken. Gibbosity of the face small with a few bristles, part of which are black and the others white; face with gray pollen, front with some small black bristles and occiput above with a row of black bristles; antenna black, first segment longer than the second, third, exclusive of the arista, about as long as the other two; arista a little shorter than the third segment. Thorax brownish gray pollinose, with a middorsal dark brown stripe narrowly divided before, and on either side two spots of the same color, one before the transverse suture and the other behind it. Wings uniformly darkened all over, but it would not be far wrong to say they are hyaline. Legs black and reddish; coxae colored like the sides of the thorax, femora entirely black except that the posterior ones are often narrowly yellowish at the extreme base; tibiae reddish at the base and black at the apex; the extent of these two colors on the tibiae is somewhat variable, the tendency being for the black to be most extensive on the outside and the reddish on the inside; feet with the first two segments reddish on basal part, other segments usually entirely black. Abdomen opaque black, before the incisures with gray bands, in the front margin of each of which on either side are two or more distinct bristles.

Length, 13-16 millimeters. A male from Kentucky, across the river from Cincinnati, collected by Chas. Dury, two females from Washington, D. C., and males and females from Riverton, N. J. and Pendleton, N. C. procured from Prof. Chas. W. Johnson.

Philonicus rufipennis n. sp. Gibbosity of the face small, furnished with a few bristles which usually are all white, but in one or two of the specimens studied there is now and then a black bristle intermixed; face and front with silvery pollen; a row of black bristles on the occiput above; first segment of the antenna black, second largely yellowish and shorter than the first, third black, not quite as long as the first two together, arista slender, about the length of the third segment; beard entirely white. Thorax gray pollinose, with a middorsal brown stripe narrowly divided before, and two spots of the same color on either side, one before and the other behind the transverse suture; coxae

gray, usually an elongate blackish spot on the front side of each femur and extreme apexes of all the tibiae and tarsal segments blackish; otherwise legs red. Wings uniformly reddish yellow all over, halteres pale yellow. Abdomen opaque black with a narrow gray band in front of each incisure and in the front margin of each of these bands there is on either side two or more bristles. The reddish wings and legs taken together are characteristic of the species.

Length, 15 millimeters. Specimens from Douglas County, Kansas, taken in May and June by E. S. Tucker.

Philonicus tuxpanganus Bellardi. Gibbosity of the face small with few bristles which are black above and white below; face rather narrow and clothed with white pollen; antenna black, first two segments with black hair, second segment shorter than the first, third segment slightly shorter than the other two together. Arista much slenderer than the third segment and a little shorter, palpi and proboscis black, beard white, Thorax everywhere clothed with silvery pollen, above with two black stripes near the middle of the dorsum and two spots of the same color on either side, one before and the other behind the suture; wings with a slight smoky tinge but this is so faint that they well may be called hyaline and there is no apparent darkening at the apex as in many species of the subfamily. Coxae silvery, extreme bases of all the tibiae reddish, otherwise legs black with black bristles; halteres pale throughout. Abdomen shining black above with narrow white bands in front of the incisures; in the front border of each white band there is on each side two or more medium sized bristles, more prominent in the male than the female; venter of the abdomen silvery and with a few white hairs.

Length, 12-15 millimeters. Taken at Gualan, Guatemala, January 13, and at Mazatenango, Guatemala, February 3, 1905.

WINTER KEY TO OHIO CHESTNUTS.

S. B. STOWE.

Castanea Adans. Trees or shrubs with furrowed bark and terete branches; twigs with rather prominent lenticels, not zigzag; leaf scars alternate; bundle scars several, scattered; stipular scars present; terminal bud present or wanting; axillary buds sessile, single, with several exposed scales; pith small, solid, more or less five-angled.

1. Large trees; twigs glabrous and shining; outer bud scales glabrous.
C. dentata (Marsh.) Borkh. Chestnut.
1. Shrubs or small trees; twigs pubescent or puberulent, dull; outer bud scales pubescent.
C. pumila (L.) Mill. Chinquapin.